

Appendix – Benchmark Results

Appendix – Current State Inventory (Benchmark Results)

Gartner has conducted two parallel benchmarks of WaTech operations, a Spending and Staffing Benchmark and a Service Catalog Rate Assessment.

The Spending and Staffing Benchmark compared WaTech against peer organizations that were selected based on industry, scale and complexity.

- The Spending and Staffing Benchmark is based on Gartner Consensus Models and does not necessarily align with the WaTech accounting or organizational structure.
- Spending and staffing levels have been normalized to peers based on Gartner definitions for cost elements and labor activities.
- The scope of this analysis included spending in fiscal year 2018 along with forecasted spend through year end. The analysis includes \$56.1M and 180.4 FTEs.

The Service Catalog Rate Assessment compared WaTech service rates to peers selected from Gartner's cost benchmark database as well as other State Government rates for similar services.

- Peer rates have been normalized to WaTech service definitions for its fiscal year 2018 rate schedule (inclusive of rate changes made in January of 2018).
- Based on unit prices and forecasted service consumption, total revenue collected in the Service Catalog Rate Assessment are \$61.8M.

The difference in the scope of the two benchmarks is due to Gartner definitions that require an alignment of total cost, staff and workload for defined IT functional areas. These functional areas do not align completely with WaTech service delivery that often delivers some of what would be included in Gartner's Spending and Staffing Benchmark.

An example of this is Data Management — Gartner would include database/database management software cost in Enterprise Computing along with all database server hardware and physical database support costs, while WaTech delivers this as a stand-alone service to departments that may provide their own servers.

WaTech fiscal year 2018 actual expenditures for service delivery totaled \$162M, while the scope of the Gartner Spending and Staffing benchmark included \$56.1M in costs.

Note that costs are excluded from the Spending and Staffing Benchmark to align with Gartner definitions (e.g., excluding capital and including depreciation when feasible, or excluding Mainframe applications software); where workload, staffing and spending are not all inclusive (e.g., some customer site costs under Data Networks are excluded from peer data as hardware and labor are not WaTech responsibilities at a subset of sites); and where the costs were not the focus of this benchmark effort, e.g., enterprise applications.

IT Staffing and Spending Benchmark – Overview

This IT Spending and Staffing Benchmark is aligned with Gartner Consensus Models, not to the WaTech Rate Structure. Some allocations of indirect cost are similar, but service definitions, costs and organization groups do not always align.

Figure 1. Gartner Consensus Model Considerations (Cost, Staffing and Workload)



Gartner benchmarks generally provide a “total cost” perspective of IT. In order for benchmark results to be accurate, it is imperative that costs, staffing levels, and workload are reported in a balanced manner. Where workload is reported, all costs and staff must also be reported, regardless of where they are held in the organization. Cost and staff within a central IT organization as well as other lines of business all should be reported.

Consistent definitions of costs elements (and accounting methods), labor activities, measures of workload and service levels ensure comparability of performance to organizations that may have diverse accounting and reporting structures.

Gartner benchmarks are based on Consensus Models that include well-documented data definitions for each benchmarked IT tower. The consensus model for each IT tower is supported by data definitions for each data element. Gartner consultants have worked with WaTech during the project to help interpret and clarify definitions to ensure results are comparable and accurate.

Peer groups are selected for each IT tower based on workload and complexity within the IT tower. The spending and support profile of each peer group is used to simulate what the comparative group would spend to support WaTech’s workload.

Results are displayed in comparison with three peer group reference points:

- Peer Average: representing the average for the comparative group
- Peer 25th Pctl: representing the lowest quartile (most efficient) for the comparative group

- Peer 75th Pctl: representing the highest quartile (least efficient) for the comparative group

Differences in spending and other metrics derived from the analysis provide insight into opportunities for increased cost efficiency and reduced risk.

IT Staffing and Spending Benchmark – Details

Gartner conducted a cost benchmark for the following areas:

- Data Network (Wide-Area Network, Internet Access Services, Inter/Intra Data Center Connectivity)
- End-User Computing and Local-Area Network
- Mainframe Enterprise Computing
- Windows and Linux Enterprise Computing
- Voice (Premise – PBX/VoIP)
- Voice (Long Distance)

Gartner focused the cost benchmark on several areas of high spend. Constraints of available benchmark data, as well as availability of WaTech data, influenced the focus areas. Some of the services that WaTech delivers cannot be isolated within the benchmark data which is part of the reason why Gartner pairs the rate analysis with the cost benchmark.

Critical elements of the relevant Consensus Models are described below.

Data Network (Wide-Area Network, Internet Access Services, Inter/Intra Data Center Connectivity):

- Hardware: routers, firewall, DNS/DHCP, accelerators, IAS and proxy servers, network management/NOC, including any disaster recovery hardware.
- Software: Security, and Network Management, including any disaster recovery software.
- Transmission: MPLS, ATM, frame relay, leased lines, VPN, internet access and usage.
- Personnel: technical support (operations and technical services), planning and process management, and administration (including management, e.g., procurement, billing, customer relationship management, etc.).

End-User Computing and Local-Area Network:

- Hardware: desktops, laptops, tablets, thin clients and handhelds. VDI servers and storage, local and shared printers, including disaster recovery hardware. Also includes switches, routers, firewalls, DNS/DHCP.
- Software: PC operating systems, personal productivity, personal databases, messaging and groupware, mobile device management, network management, and security, including disaster recovery software.
- Personnel: technical support (operations and technical services), planning and process management, and administration (including management, e.g., procurement, billing, customer relationship management, etc.).

Mainframe Enterprise Computing:

- Hardware: mainframe processors and internal disk storage, including any disaster recovery hardware.
- Software: operating systems, virtualization, database/database management, middleware, messaging, and security, including any disaster recovery software.
- Personnel: technical support (operations and technical services), planning and process management, and administration (including management, e.g., procurement, billing, customer relationship management, etc.).

Windows and Linux Enterprise Computing:

- Hardware: server processors and internal disk storage, including any disaster recovery hardware.
- Software: operating systems, virtualization, database/database management, middleware, messaging, and security, including any disaster recovery software.
- Personnel: technical support (operations and technical services), planning and process management, and administration (including management, e.g., procurement, billing, customer relationship management, etc.).

Voice (Premise – PBX/VoIP):

- Hardware: TDM PBX, VoIP/IPT servers, voicemail, phones, MAC Supplies, including disaster recovery hardware.
- Software: voice switch, VoIP/IPT servers, voicemail, network management and billing/chargeback, including disaster recovery software.
- Transmission: local calling trunk lines, and number blocks.
- Personnel: technical support (operations and technical services), planning and process management, and administration (including management, e.g., procurement, billing, customer relationship management, etc.).

Voice (Long Distance):

- Hardware: trunk interface cards, private network hardware, tandem switches, MUXx, channel banks, including disaster recovery hardware.
- Software: Voice network management, and chargeback/billing, including disaster recovery software.
- Transmission: access lines, outbound and inbound usage, leased lines, client owned and maintained transmission facilities.
- Personnel: technical support (operations and technical services), planning and process management, and administration (including management, e.g., procurement, billing, customer relationship management, etc.).

Gartner made several adjustments to the data to ensure alignment to peers.

- Eliminated internal sales (cross-charges) to avoid double counting cost.
- Removed non-personnel overhead cost, and removed HR labor (other overhead labor aligns to benchmark personnel-related costs).

- Across each of the cost benchmark areas, Gartner made additional adjustments to align WaTech cost with the peer group for an appropriate comparison. These specific adjustments are called out in the sections below.

Data Network (Wide-Area Network, Internet Access Services, Inter/Intra Data Center Connectivity)

This section covers Data Network (Data Center Connectivity, Wide-Area Network and Internet Access Services) related spending and staffing.

Data Network peer selection is based on WaTech's workload of total sites (747), total circuits (1,263), total port bandwidth (142,460 Mbps) and total users (60,000). It also includes peer costs for data center network support based on 3,730 MIPS, 987 physical servers and 3,657 TBs raw configured storage.

The peer group includes 11 Government entities.

Table 1. Data Network Spend Details (\$)

Spend Details	WaTech Cost	Peer Avg Cost	Peer 25 th Pctl Cost	Peer 75 th Pctl Cost	Variance from Avg.
Hardware and Software	3,629,823	6,108,577	3,677,942	8,426,622	-41%
Transmission	8,516,103	10,174,413	6,361,367	13,291,543	-16%
Personnel	7,129,199	5,272,122	3,144,044	7,368,821	35%
Totals	19,275,125	21,555,112	13,183,353	29,086,986	-11%

Note: Cost data is annualized for FY18. In order to align WaTech data to the consensus model, Gartner started with FY18 spend for the Data Network allocation and Cloud and Office VPN costs. Gartner made an adjustment to peer data to exclude a percentage of WAN site cost that is the responsibility of the customers (hardware, software, and labor) given shared effort between the agencies and WaTech (i.e., the 62% of CE equipment purchased by customers and therefore not reflected in WaTech costs, and estimated 62% of site labor and software costs also covered directly by agencies). Gartner used a five year average of hardware and software spend (capital expenses and maintenance) from the lifecycle cost estimate in place of the specific spend for FY18 as a more accurate straight-lined view of annual spend (accurate depreciation information was not available). The Transmission cost category includes vendor circuits and fiber leases, and pole rentals, and internet fee. Gartner made an assumption that roughly ten percent of traffic is voice traffic and realigned ten percent of data network transmission to the PBX/VoIP cost accordingly. Gartner then excluded portions of overhead and internal sales to align to the consensus model definitions.

Table 2. Data Network Staffing Details (FTEs)

Staffing Details	WaTech	Peer Avg	Peer 25 th Pctl	Peer 75 th Pctl	Variance from Avg.
FTE	57.4	48.9	22.4	64.8	17%

Note: In order to align WaTech FTEs to the consensus model, Gartner included staff aligned to Data Network and Office and Cloud VPN, and excluded the HR portion of overhead FTEs.

End-User Computing and Local-Area Network

This section covers End-User Computing and Local-Area Network related spending and staffing.

End-User Computing and Local-Area Network peer selection is based on WaTech's workload of 2,518 end-user devices (desktop/laptop/tablet) and 5,185 active Local-Area Network ports. The peer group includes 13 Government entities.

Table 3. End-User Computing and Local-Area Network Spend Details (\$)

Spend Details	WaTech Cost	Peer Avg Cost	Peer 25 th Pctl Cost	Peer 75 th Pctl Cost	Variance from Avg.
Hardware	1,140,000	1,190,634	867,121	1,465,113	-4%
Software	556,875	684,894	513,685	820,194	-19%
Personnel	2,979,115	1,650,087	1,220,837	2,001,496	81%
Totals	4,675,990	3,525,615	2,601,643	4,286,803	33%

Note: Cost data is annualized for FY18. In order to align WaTech data to the consensus model, Gartner started with FY18 spend for the Desktop/LAN costs and made required adjustments. WaTech was not able to provide a straight-lined five year view of life-cycle refresh equipment purchases for this service, and equipment depreciation details are not available as most purchases are under the threshold for capitalization. Therefore, the value used for capital hardware expenditure is WaTech's annual estimate for lifecycle refresh this biennium. Gartner excluded portions of overhead and internal sales to align to the consensus model definitions.

Table 4. End-User Computing and Local-Area Network Staffing Details (FTEs)

Staffing Details	WaTech	Peer Avg	Peer 25 th Pctl	Peer 75 th Pctl	Variance from Avg.
FTE	27.9	18.3	13.6	22.1	52%

Note: In order to align WaTech FTEs to the consensus model, Gartner included staff aligned to Desktop, and excluded the HR portion of overhead FTEs.

Mainframe Enterprise Computing

This section covers Mainframe related spending and staffing.

Mainframe peer selection is based on WaTech's workload of 1,639 general purpose MIPS and 2,091 IFL MIPS. zIIP MIPS have been excluded as they largely unused.

The peer group includes six Government entities.

Table 5. Mainframe Enterprise Computing Spend Details (\$)

Spend Details	WaTech Cost	Peer Avg Cost	Peer 25 th Pctl Cost	Peer 75 th Pctl Cost	Variance from Avg.
Hardware	773,382	976,321	583,638	1,262,815	-21%
Software	6,730,913	5,647,065	3,375,778	7,304,157	19%
Disaster Recovery	568,644	437,734	261,675	566,185	30%
Personnel	3,361,801	4,551,934	2,721,116	5,887,668	-26%
Totals	11,434,740	11,613,054	6,942,207	15,020,825	-2%

Note: Cost data is annualized for FY18. In order to align WaTech data to the consensus model, Gartner started with FY18 spend for the Mainframe costs. Gartner replaced the debt service payment with annual depreciation for better alignment of hardware costs. The SunGard contract is aligned to disaster recovery spend. Gartner excluded portions of overhead and internal sales to align to the consensus model definitions.

Table 6. Mainframe Enterprise Computing Staffing Details (FTEs)

Staffing Details	WaTech	Peer Avg	Peer 25 th Pctl	Peer 75 th Pctl	Variance from Avg.
FTE	29.1	38.9	23.2	50.3	-25%

Note: In order to align WaTech FTEs to the consensus model, Gartner included staff aligned to Mainframe (High Capacity Compute), and excluded the HR portion of overhead FTEs.

Windows and Linux Enterprise Computing

This section covers Windows and Linux Servers related spending and staffing.

Windows peer selection is based on WaTech's workload of 1,267 Operating System Instances (across all environments including the Private Cloud, Platform & Connectivity, and Managed Servers). The peer group includes 12 Government entities.

Linux peer selection is based on WaTech's workload of 325 Operating System Instances (across all environments including the Private Cloud, Platform & Connectivity, and Managed Servers). The peer group includes 7 Government, 1 Utility, and 1 Hospital.

Table 7. Windows and Linux Enterprise Computing Spend Details (\$)

Spend Details	WaTech Cost	Peer Avg Cost	Peer 25 th Pctl Cost	Peer 75 th Pctl Cost	Variance from Avg.
Hardware	1,278,202	1,044,961	835,186	1,204,582	22%
Software	1,467,175	2,076,852	1,663,768	2,394,820	-29%
Personnel	4,672,277	3,319,968	2,653,314	3,827,068	41%
Totals	7,417,654	6,441,781	5,152,268	7,426,469	15%

Note: Cost data is annualized for FY18. In order to align WaTech data to the consensus model, Gartner started with Private Cloud, Managed Server and Platform and Connectivity FY18 spend. WaTech costs were adjusted to align to the consensus model by augmenting cost to reflect full support costs on a per server basis which was estimated based on managed server environment support costs. Gartner excluded Platform and Connectivity costs that are unrelated to managed server support. Gartner excluded portions of overhead and internal sales to align to the consensus model definitions.

Table 8. Windows and Linux Enterprise Staffing Details (FTEs)

Staffing Details	WaTech	Peer Avg	Peer 25 th Pctl	Peer 75 th Pctl	Variance from Avg.
FTE	36.1	29.7	23.7	34.3	22%

Note: In order to align WaTech FTEs to the consensus model, Gartner included staff aligned to Private Cloud, Managed Server, and half of Platform and Connectivity. Private Cloud and Managed Server staffing was then adjusted based on the managed server cost of \$243 per server for support (currently supporting 176 servers at a cost of \$500k) in order to align costs to peers under a fully supported model. Finally Gartner excluded the HR portion of overhead FTEs.

Voice (Premise – PBX/VoIP)

This section covers PBX/VoIP related spending and staffing.

PBX/VoIP peer selection is based on 53,115 active PBX/VoIP lines. The peer group includes 9 Government entities.

Costs for PBX/VoIP reflect a large ongoing project to convert to VoIP.

Table 9. Voice (Local PBX/VoIP) Spend Details (\$)

Spend Details	WaTech Cost	Peer Avg Cost	Peer 25 th Pctl Cost	Peer 75 th Pctl Cost	Variance from Avg.
Hardware	879,880	1,978,633	1,691,288	2,222,572	-56%
Software	5,388,940	883,531	755,221	992,459	510%
Transmission	1,840,234	5,673,538	4,849,604	6,373,009	-68%
Personnel	3,276,554	2,011,160	1,719,091	2,259,109	63%
Personnel (Outsource)	907,000	-	-	-	
Totals	12,292,608	10,546,862	9,015,204	11,847,149	17%

Note: Cost data is annualized for FY18. In order to align WaTech data to the consensus model, Gartner started with FY18 spend for the PBX/VoIP. Costs for upgrades and conversions (almost \$2M) and new site installations (\$500k) were split apart into hardware, software, and outsourced labor components, and hardware depreciation was added. Gartner made an assumption that roughly ten percent of traffic is voice traffic and realigned ten percent of data network transmission to the PBX/VoIP cost accordingly. Gartner excluded portions of overhead and internal sales to align to the consensus model definitions.

Table 10. Voice (Local PBX/VoIP) Staffing Details (FTEs)

Staffing Details	WaTech	Peer Avg	Peer 25 th Pctl	Peer 75 th Pctl	Variance from Avg.
FTE (Outsource)	5.4	-	-	-	
FTE	29.9	21.1	18.0	23.7	42%

Note: In order to align WaTech FTEs to the consensus model, Gartner started with the PBX/VoIP spend plan and augmented staffing with outsource FTEs (assuming 125% of the per FTE insourced cost). Finally Gartner excluded the HR portion of overhead FTEs.

Voice (Long Distance)

This section covers Voice (Long Distance) related spending and staffing.

Long Distance peer selection is based on WaTech's workload of 21,080,916 minutes per year. The peer group includes 3 Government, 5 Utilities, and 2 Insurance.

Table 11. Voice (Long Distance) Spend Details (\$)

Spend Details	WaTech Cost	Peer Avg Cost	Peer 25 th Pctl Cost	Peer 75 th Pctl Cost	Variance from Avg.
Hardware and Software	-	21,288	15,358	26,338	-100%
Transmission	576,000	596,976	355,549	785,135	-4%
Personnel	477,066	122,096	88,086	151,061	291%
Totals	1,053,066	740,360	458,993	962,534	42%

Note: Cost data is annualized for FY18. In order to align WaTech data to the consensus model, Gartner started with FY18 spend for Switched Long Distance. Carrier pass-through costs are reflected in the Transmission category. Gartner excluded portions of overhead and internal sales to align to the consensus model definitions.

Table 12. Voice (Long Distance) Staffing Details (FTEs)

Staffing Details	WaTech	Peer Avg	Peer 25 th Pctl	Peer 75 th Pctl	Variance from Avg.
FTE	5.0	1.1	0.8	1.4	355%

Note: Note: In order to align WaTech FTEs to the consensus model, Gartner included staff aligned to Long Distance, and excluded the HR portion of overhead FTEs.

IT Service Catalog Rate Assessment – Overview

An IT Service Catalog Rate Assessment compares your WaTech service rates with the rates or equivalent unit costs of other IT service providers and peer organizations.

This comparison is made on two levels:

- Charges or costs for specific services (e.g., Email)
- Charges or costs for a standard market-basket of IT services (desktop, email, storage, hosting, etc.)

Peer organizations are selected using size (workload), complexity, technology and service-level factors, among others, to ensure a like-to-like rate comparison for each service.

Service rate benchmarking requires:

- An IT service catalog describing WaTech services, rates, and service levels
- Service volumes and other environmental information
- A comprehensive set of costs from hundreds of IT service providers, which Gartner will provide via our benchmarking database

Gartner executed the following three step methodology to complete this rate assessment.

1. Understanding your environment

- Conducted a series of interviews with WaTech service owners and finance personnel in order to fully understand all relevant aspects of WaTech service catalog and service rates.
- Documented the services in the current state inventory section of this document in order to capture updated service descriptions, technical details and rate details to enable a more accurate rate assessment

2. Peer selection and normalization

- With an understanding of WaTech's service catalog and technical environment, Gartner selected a set of peers to use for comparison.
- Gartner then performed a series of normalization processes on recent cost data in the Gartner benchmarking database, ensuring like-for-like comparison of WaTech service rates with peer service rates; these normalization processes encompass:
 - Scope
 - Geographic distribution
 - Employed technologies
 - Environment supported
 - Service-level commitments
 - Terms and conditions
 - Labor market factors

3. Aligning rate structures and rates

- Where the level of detail in Service Offerings is greater than the level of detail in the Gartner benchmark database, Gartner calculates comparable rates using a dollar weight averaging approach.

- Gartner calculates total peer costs (revenue) to support a similar overall environment (peer unit cost times WaTech billed units).
4. Final report
- These rate comparison details have been pulled into this comprehensive report that compares the competitiveness of WaTech service rates with the normalized service rates of WaTech's peers.

Not all WaTech rates are included in this analysis. Pass-through, allocation, and service agreement-based rates are generally excluded. Some rate comparisons are based on averages for a category rather than individual rates.

- Long distance is compared only to the average WaTech rates.
- Desktop and LAN are compared as a blended rate.

Peer rates have been drawn from two sources: Gartner's benchmark database, using peers from the IT Spending and Staffing Benchmarks, Gartner has reallocated peer costs from the Gartner benchmark cost structure to the WaTech's rate structure; and State Service Catalogs, where Gartner has researched other state service catalogs and rates and included rates in peer calculations where services and rates are aligned with WaTech.

Overall, total WaTech costs recovered from reported rates and billed quantities are about 25% higher than peers would generate for similar services, \$61.8M vs. \$49.3M.

IT Service Catalog Rate Assessment – Details

IT Service Catalog Rate Assessment details follow in the subsections below:

- Network & Telephony services
- Platform Services
- Security & Identity Services
- Workspace Services
- Application Services
- IT Programs

Network & Telephony Services

This section includes the following services:

1. Switched Long Distance
2. Centrex
3. PBX/VoIP/IVR
4. Citrix Edge
5. SSL VPN (Remote Access)
6. Cloud and Office VPN

1. Switched Long Distance

Total revenue collected is \$1.2M versus \$0.8M for the peer group average (40% higher).

Table 13. Switched Long Distance Rates Table

Service	Measure	WaTech Rate	Peer Avg Rate	Peer 25 th Pctl Rate	Peer 75 th Pctl Rate
Switched Long Distance (Blended Rate)	per Minute	0.0425	.0304	.0251	.0338

*Note: Rates for Switched Long Distance could not be benchmarked individually, but a blended average based on capacity, features and service volumes was aligned with peer data and blended to provide an average comparison. WaTech provided a blended rate and number of minutes billed. However, when used to calculate revenue, it only generates about half of WaTech's anticipated revenue for the year. For the purpose of this analysis, Gartner has assumed the blended rate is correct, but the billed minutes was understated, and has adjusted to match revenue.

Table 14. Switched Long Distance Billed Volume and Total Cost Recovered

Service	Billed Units	WaTech Revenue	Peer Avg Revenue	Peer 25 th Pctl Revenue	Peer 75 th Pctl Revenue
Switched Long Distance (Blended Rate)	29,082,353	1,236,000	884,104	729,967	982,984

2. Centrex

Total revenue collected is \$2.9M versus \$1.8M for the peer group average (61% higher).

Table 15. Centrex Rates Table

Service	Measure	WaTech Rate	Peer Avg Rate	Peer 25 th Pctl Rate	Peer 75 th Pctl Rate
Centrex	per Ext per Month	45.00*	23	19	27

Note: (*) This analysis has been completed with a prorated rate in FY18 of \$37 per line.

Table 16. Centrex Billed Volume and Total Cost Recovered

Service	Billed Units	WaTech Revenue	Peer Avg Revenue	Peer 25 th Pctl Revenue	Peer 75 th Pctl Revenue
Centrex	6,642	2,949,048	1,833,192	1,514,376	2,152,008

Note: (*) This analysis has been completed with a prorated rate in FY18 of \$37 per line. If the rate had been \$45 per line for the full year WaTech would have recovered \$3,586,680, given the workload averaged over the fiscal year.

3. PBX/VoIP/IVR

Total revenue collected is \$16.4M versus \$12.3M for the peer group average (33% higher).

Table 17. PBX/VoIP/IVR Rates Table

Service	Measure	WaTech Rate	Peer Avg Rate	Peer 25 th Pctl Rate	Peer 75 th Pctl Rate
Private Branch Exchange (PBX)/VoIP	per Ext per Month	24 (*)	18	13	20
IVR Standard	per Port per Month	120	94	70	117

Note: (*) WaTech also offers a \$2 per seat/month discount for lines partially managed by agency staff. Fourteen percent of lines include some agency management. This analysis has been completed assuming consistent level of support across all lines in order to align peer rates.

Table 18. PBX/VoIP/IVR Billed Volume and Total Cost Recovered

Service	Billed Units	WaTech Revenue	Peer Avg Revenue	Peer 25 th Pctl Revenue	Peer 75 th Pctl Revenue
Private Branch Exchange (PBX)/VoIP	53,115	15,297,120	11,472,840	8,285,940	12,747,600
IVR Standard	762	1,097,280	859,536	640,080	1,069,848
Total	53,877	16,394,400	12,332,376	8,926,020	13,817,448

4. Citrix Edge

Total revenue collected is \$0.042M versus \$0.018M for the peer group average (77% lower).

Table 19. Citrix Edge Rates Table

Service	Measure	WaTech Rate	Peer Avg Rate	Peer 25 th Pctl Rate	Peer 75 th Pctl Rate
Citrix Account	Per Account / Month	6	26	18	34

Table 20. Billed Volume and Total Cost Recovered

Service	Billed Units	WaTech Revenue	Peer Avg Revenue	Peer 25 th Pctl Revenue	Peer 75 th Pctl Revenue
Citrix Account	589	42,408	183,768	127,224	240,312

5. SSL VPN (Remote Access)

Total revenue collected is \$1.1M versus \$0.67M for the peer group average (63% higher).

Table 21. SSL VPN (Remote Access) Rates Table

Service	Measure	WaTech Rate	Peer Avg Rate	Peer 25 th Pctl Rate	Peer 75 th Pctl Rate
SSL VPN with Hard Token	Per Account / Month	17.45	10.22	10.31	11.18

Service	Measure	WaTech Rate	Peer Avg Rate	Peer 25 th Pctl Rate	Peer 75 th Pctl Rate
SSL VPN with Soft Token	Per Account / Month	9.00	6.17	5.00	6.70

Table 22. SSL VPN (Remote Access) Billed Volume and Total Cost Recovered

Service	Billed Units	WaTech Revenue	Peer Avg Revenue	Peer 25 th Pctl Revenue	Peer 75 th Pctl Revenue
SSL VPN with Hard Token	792,160	463,947	468,033	507,527	792,160
SSL VPN with Soft Token	305,532	209,459	169,740	227,452	305,532
Total	1,097,692	673,406	637,773	734,979	1,097,692

6. Cloud and Office VPN

Total revenue collected is \$0.53M versus \$0.38M for the peer group average (36% higher).

Table 23. Cloud and Office VPN Rates Table

Service	Measure	WaTech Rate	Peer Avg Rate	Peer 25 th Pctl Rate	Peer 75 th Pctl Rate
Office and Cloud VPN (Blended Rate)	Per Site-Tunnel / Month	276	197	141	231
Office VPN Site Setup Fee	One Time Cost	500	557	443	669

Note: WaTech's blended rate was calculated as an average of the different recurring rates across both Cloud and Office VPN. The workload for new sites was estimated based on WaTech's stated growth in FY17 through FY18 and signed new customers

Table 24. Cloud and Office VPN Billed Volume and Total Cost Recovered

Service	Billed Units	WaTech Revenue	Peer Avg Revenue	Peer 25 th Pctl Revenue	Peer 75 th Pctl Revenue
Office and Cloud VPN Blended Rate	152	503,424	359,328	257,184	421,344
Office VPN Site Setup Fee	50	25,000	27,850	22,150	33,450
Total		528,424	387,178	279,334	454,794

Platform Services

This section includes the following services:

1. SDC/QDC Colocation
2. Mainframe
3. Backup
4. Storage
5. WaServ/Email Vault Storage
6. Server Support Services
7. DB Management Services

1. SDC/QDC Colocation

Total revenue collected is \$3.8M versus \$4.4 for the peer group average (13% lower).

Table 25. SDC/QDC Colocation Rates Table

Service	Measure	WaTech Rate	Peer Avg Rate	Peer 25 th Pctl Rate	Peer 75 th Pctl Rate
Half-size (21RU) 2.5 kW Enclosure	Per Enclosure / Month	650	540	456	626
Full-size (42RU) 5 kW Enclosure	Per Enclosure / Month	1,000	1,202	776	1,480
Full-size (42RU) 7.5 kW Enclosure	Per Enclosure / Month	1,500	1,757	1,187	2,344
Full-size (42RU) 10 kW Enclosure	Per Enclosure / Month	2,000	1,930	1,434	2,000
Full-size (42RU) 12.5 kW Enclosure	Per Enclosure / Month	2,500	2,078	1,755	2,409

Table 26. SDC/QDC Colocation Billed Volume and Total Cost Recovered

Service	Billed Units	WaTech Revenue	Peer Avg Revenue	Peer 25 th Pctl Revenue	Peer 75 th Pctl Revenue
Half-size (21RU) 2.5 kW Enclosure	33	257,400	213,840	180,576	247,896
Full-size (42RU) 5 kW Enclosure	206	2,472,000	2,971,344	1,918,272	3,658,560
Full-size (42RU) 7.5 kW Enclosure	43	774,000	906,612	612,492	1,209,504
Full-size (42RU) 10 kW Enclosure	10	240,000	231,600	172,080	240,000
Full-size (42RU) 12.5 kW Enclosure	2	60,000	49,872	42,120	57,816
Total		3,803,400	4,373,268	2,925,540	5,413,776

2. Mainframe

Total revenue collected is \$12.5M versus \$8.7M for the peer group average (43% higher).

Table 27. Mainframe Rates Table

Service	Measure	WaTech Rate	Peer Avg Rate	Peer 25 th Pctl Rate	Peer 75 th Pctl Rate
System 390 Mainframe Platform	Per CPU / Hour	333.41	233.68	139.69	341.53

Note: Only the base rate has been applied in this rate analysis and no discounts have been applied.

Table 28. Mainframe Billed Volume and Total Cost Recovered

Service	Billed Units	WaTech Revenue	Peer Avg Revenue	Peer 25 th Pctl Revenue	Peer 75 th Pctl Revenue
System 390 Mainframe Platform	37,394	12,467,534	8,738,230	5,223,568	12,771,173

3. Backup

Total revenue collected is \$0.78M versus \$0.2M for the peer group average (290% higher).

Table 29. Backup Rates Table

Service	Measure	WaTech Rate	Peer Avg Rate	Peer 25 th Pctl Rate	Peer 75 th Pctl Rate
Server Backup	Per GB / Month	0.50	0.13	0.07	0.15

Table 30. Backup Billed Volume and Total Cost Recovered

Service	Billed Units	WaTech Revenue	Peer Avg Revenue	Peer 25 th Pctl Revenue	Peer 75 th Pctl Revenue
Server Backup	130,560	783,360	203,674	109,670	235,008

4. Storage

Given the mix of storage that customers purchased, total revenue collected is \$1.35M versus \$1.48M for the peer group average (9% lower). WaTech collected 85% more for ultra-high performance, and 6% more for commodity, but collected 20% less for high performance storage.

Table 31. Storage Rates Table

Service	Measure	WaTech Rate	Peer Avg Rate	Peer 25 th Pctl Rate	Peer 75 th Pctl Rate
Ultra-High Performance	Per GB / Month	1.48	0.80	0.43	0.86
High Performance	Per GB / Month	0.36	0.45	0.25	0.47
Commodity	Per GB / Month	0.17	0.16	0.09	0.17

Table 32. Storage Billed Volume and Total Cost Recovered

Service	Billed Units	WaTech Revenue	Peer Avg Revenue	Peer 25 th Pctl Revenue	Peer 75 th Pctl Revenue
Ultra-High Performance	7,587.00	134,745.12	72,835.20	39,148.92	78,297.84

Service	Billed Units	WaTech Revenue	Peer Avg Revenue	Peer 25 th Pctl Revenue	Peer 75 th Pctl Revenue
High Performance	202,729.00	875,789.28	1,094,736.60	608,187.00	1,143,391.56
Commodity	165,119.00	336,842.76	317,028.48	178,328.52	336,842.76
Total		1,347,377.16	1,484,600.28	825,664.44	1,558,532.16

5. WaServ/Email Vault Storage

Total revenue collected is \$2.9M versus \$2.2M for the peer group average (32% higher).

Table 33. WaServ/Email Vault Storage Rates Table

Service	Measure	WaTech Rate	Peer Avg Rate	Peer 25 th Pctl Rate	Peer 75 th Pctl Rate
WaServ Email Storage Fee	Per GB / Month	1.27	0.96	0.91	1.04

Note: The per seat portion of this service is captured under Shared Email and is not reflected here. Some peer rates were blended to incorporate backup fees.

Table 34. WaServ/Email Vault Billed Volume and Total Cost Recovered

Service	Billed Units	WaTech Revenue	Peer Avg Revenue	Peer 25 th Pctl Revenue	Peer 75 th Pctl Revenue
WaServ Email Storage Fee	190,000	2,895,600	2,188,800	2,074,800	2,371,200

6. Server Support Services

Total revenue collected is \$0.89M versus \$0.3M for the peer group average (193% higher).

Table 35. Server Support Services Rates Table

Service	Measure	WaTech Rate	Peer Avg Rate	Peer 25 th Pctl Rate	Peer 75 th Pctl Rate
Server Support Service	Per Server / Month	422	144	116	175

Table 36. Server Support Services Billed Volume and Total Cost Recovered

Service	Billed Units	WaTech Revenue	Peer Avg Revenue	Peer 25 th Pctl Revenue	Peer 75 th Pctl Revenue
Server Support Service	176	891,264	304,128	244,992	369,600

7. DB Management Services

Total revenue collected is \$0.45M versus \$0.41M for the peer group average (10% higher).

Table 37. DB Management Services Rates Table

Service	Measure	WaTech Rate	Peer Avg Rate	Peer 25 th Pctl Rate	Peer 75 th Pctl Rate
DBA and Data Integration Support	Per Hour	160	122	111	127
Monthly DBMS Software Licensing	Per Prod vCPU / Month	75	75	62	87

Note: WaTech also offers a \$300 per month (DBMS Platform) and \$600 per month (Full Service) DBA service. However, all revenue has been generated through licensing and hourly fees thus far which made those rates the focus of this rate review.

Table 38. DB Management Services Billed Volume and Total Cost Recovered

Service	Billed Units	WaTech Revenue	Peer Avg Revenue	Peer 25 th Pctl Revenue	Peer 75 th Pctl Revenue
DBA and Data Integration Support	1138	182,080	138,836	126,318	144,526
Monthly DBMS Software Licensing	304	273,600	273,600	226,176	317,376
Total		455,680	412,436	352,494	461,902

Note: Analysis assumes that 60% of FY18 forecast will pay for licenses.

Security & Identity Services

This section includes the following services:

1. Active Directory/ IAM

1. Active Directory/ IAM

Total revenue collected is \$0.18M versus \$0.24M for the peer group average (51% lower).

Table 39. Active Directory/ IAM Rates Table

Service	Measure	WaTech Rate	Peer Avg Rate	Peer 25 th Pctl Rate	Peer 75 th Pctl Rate
Enterprise AD (Shared Domain)	Per User / Month	2.14	4.35	3.39	4.94

Note: Analysis only examines the Shared Domain service and does not evaluate the hosted domain rate.

Table 40. Active Directory/ IAM Billed Volume and Total Cost Recovered

Service	Billed Units	WaTech Revenue	Peer Avg Revenue	Peer 25 th Pctl Revenue	Peer 75 th Pctl Revenue
Enterprise AD (Shared Domain)	4,605	118,256	240,381	187,331	272,984

Workspace Services

This section includes the following services:

1. Desktop/LAN Support
2. Directory Assistance (citizens)
3. Mobile Device Management
4. Shared Email
5. Skype Services
6. WebEx Video Conf.
7. Teleconferencing
8. Wireless (WIFI)

1. Desktop/LAN Support

Total revenue collected is \$6.5M versus \$4.2M for the peer group average (53% higher).

Table 41. Desktop/LAN Rates Table

Service	Measure	WaTech Rate	Peer Avg Rate	Peer 25 th Pctl Rate	Peer 75 th Pctl Rate
Desktop/LAN Support	Per Device / Month	291.67	190.55	169.07	213.03

Note: Rate comparison incorporates peer LAN and Desktop rates as a blended rate.

Table 42. Desktop/LAN Billed Volume and Total Cost Recovered

Service	Billed Units	WaTech Revenue	Peer Avg Revenue	Peer 25 th Pctl Revenue	Peer 75 th Pctl Revenue
Desktop/LAN Support	1,853	6,485,574	4,237,070	3,759,441	4,736,935

2. Directory Assistance (citizens)

Total revenue collected is \$0.1M versus \$0.015M for the peer group average (586% higher).

Table 43. Directory Assistance (citizens) Rates Table

Service	Measure	WaTech Rate	Peer Avg Rate	Peer 25 th Pctl Rate	Peer 75 th Pctl Rate
Directory Assistance	Per Call	14.40	2.10	1.05	4.20

Table 44. Directory Assistance (citizens) Billed Volume and Total Cost Recovered

Service	Billed Units	WaTech Revenue	Peer Avg Revenue	Peer 25 th Pctl Revenue	Peer 75 th Pctl Revenue
Directory Assistance	7,500	108,000	15,750	7,875	31,500

3. Mobile Device Management

Total revenue collected is \$0.34M versus \$0.38M for the peer group average (10% lower).

Table 45. Mobile Device Management Rates Table

Service	Measure	WaTech Rate	Peer Avg Rate	Peer 25 th Pctl Rate	Peer 75 th Pctl Rate
Mobile Device Management	Per Device / Month	5.50	6.10	5.00	7.35

Table 46. Mobile Device Management Billed Volume and Total Cost Recovered

Service	Billed Units	WaTech Revenue	Peer Avg Revenue	Peer 25 th Pctl Revenue	Peer 75 th Pctl Revenue
Mobile Device Management	5,217	344,322	381,884	313,020	460,139

4. Shared Email Services

Total revenue collected is \$4.7M versus \$5.9M for the peer group average (22% lower). Secure Email was 61% lower, Shared Services Email (Vault) was 20% lower, and Shared Email (Exchange) was 8% lower.

Table 47. Shared Email Services Rates Table:

Service	Measure	WaTech Rate	Peer Avg Rate	Peer 25 th Pctl Rate	Peer 75 th Pctl Rate
Shared Services - Email (Exchange)	Per Mailbox / Month	2.65	2.87	2.40	3.25
Shared Services - Email (Vault)	Per Seat / Month	2.25	2.82	2.78	2.86
Secure Email	Per Mailbox / Month	0.56	1.44	1.20	1.80

Table 48. Shared Email Services Billed Volume and Total Cost Recovered:

Service	Billed Units	WaTech Revenue	Peer Avg Revenue	Peer 25 th Pctl Revenue	Peer 75 th Pctl Revenue
Shared Services - Email (Exchange)	2,325,216.00	2,518,252.80	2,105,856.00	2,851,680.00	2,325,216.00
Shared Services - Email (Vault)	1,974,240.00	2,474,380.80	2,439,283.20	2,509,478.40	1,974,240.00
Secure Email	378,719.04	973,848.96	811,540.80	1,217,311.20	378,719.04
Total	4,678,175.04	5,966,482.56	5,356,680.00	6,578,469.60	4,678,175.04

5. Skype Services

Total revenue collected is \$0.585M versus \$0.519M for the peer group average (13% higher).

Table 49. Skype Services Rates Table

Service	Measure	WaTech Rate	Peer Avg Rate	Peer 25 th Pctl Rate	Peer 75 th Pctl Rate
Skype Services	Per User / Month	3.50	3.10	1.86	3.80

Table 50. Skype Services Billed Volume and Total Cost Recovered

Service	Billed Units	WaTech Revenue	Peer Avg Revenue	Peer 25 th Pctl Revenue	Peer 75 th Pctl Revenue
Skype Services	13,951	585,942	518,977	311,386	636,166

6. WebEx Video Conf.

Total revenue collected is \$0.28M versus \$0.34M for the peer group average (19% lower).

Table 51. WebEx Video Conf. Rates Table

Service	Measure	WaTech Rate	Peer Avg Rate	Peer 25 th Pctl Rate	Peer 75 th Pctl Rate
WebEx account fee	Per User / Month	35	45	43	49
WebEx Toll Free/ Callback (800 Service)	Per Minute	0.07	0.05	0.04	0.06

Note: WaTech also charges for a bridging fee, user toll charges, and toll free minutes over 100,000 at a quoted rate, as well as additional storage fees. However, based on availability of peer data in alignment with WaTech offerings, this section is focused on account fees and toll free calling charges.

Table 52. WebEx Video Conf. Billed Volume and Total Cost Recovered

Service	Billed Units	WaTech Revenue	Peer Avg Revenue	Peer 25 th Pctl Revenue	Peer 75 th Pctl Revenue
WebEx account fee	603	253,260.00	325,620.00	311,148.00	354,564.00
WebEx Toll Free/ Callback (800 Service)	316,514	22,155.98	15,825.70	12,660.56	18,990.84
Total		275,415.98	341,445.70	323,808.56	373,554.84

7. Teleconferencing

Total revenue collected is \$1M versus \$0.8M for the peer group average (29% higher).

Table 53. Teleconferencing Rates Table

Service	Measure	WaTech Rate	Peer Avg Rate	Peer 25 th Pctl Rate	Peer 75 th Pctl Rate
Audio Conferencing Call	per Minute	0.09	0.07	0.04	0.10

Table 54. Teleconferencing Billed Volume and Total Cost Recovered

Service	Billed Units	WaTech Revenue	Peer Avg Revenue	Peer 25 th Pctl Revenue	Peer 75 th Pctl Revenue
Audio Conferencing Call	11,799,844	1,061,986	825,989	471,994	1,179,984

8. Wireless (WIFI)

Total revenue collected is \$0.8M versus \$0.6M for the peer group average (32% higher).

Table 55. Wireless (WIFI) Rates Table

Service	Measure	WaTech Rate	Peer Avg Rate	Peer 25 th Pctl Rate	Peer 75 th Pctl Rate
Wifi Monthly Recurring Charge	Per Access Point / Month	50	38	25	40

Note: WaTech charges a one-time fee for development of a site plan. Peers charge on average about \$1,061 for site design and installation services at a fixed rate, the one-time fee has been excluded from this analysis.

Table 56. Wireless (WIFI) Billed Volume and Total Cost Recovered

Service	Billed Units	WaTech Revenue	Peer Avg Revenue	Peer 25 th Pctl Revenue	Peer 75 th Pctl Revenue
Wifi Monthly Recurring Charge	1,396	837,600	636,576	418,800	670,080

Note: (*) Monthly recurring calculated based on January rate change. Actual revenue based on the prorated rate would be closer to 13% higher than average peer.

Application Services

This section includes the following services:

1. Project Management
2. Agile Business Analysts
3. UX & Accessibility
4. Web Platform/Design

1. Project Management

Total revenue collected is \$1.9M versus \$1.7M for the peer group average (15% higher).

Table 57. Project Management Rates Table

Service	Measure	WaTech Rate	Peer Avg Rate	Peer 25 th Pctl Rate	Peer 75 th Pctl Rate
Project Manager (Internal Rate)	Per Hour	140	122	110	130

Table 58. Project Management Billed Volume and Total Cost Recovered

Service	Billed Units	WaTech Revenue	Peer Avg Revenue	Peer 25 th Pctl Revenue	Peer 75 th Pctl Revenue
Project Manager (Internal Rate)	13,696	1,917,440	1,670,912	1,506,560	1,780,480

Note: Assumes only internal billing (annualized at the same rate as H1).

2. Agile Business Analysts

Total revenue collected is \$0.08M versus \$0.05M for the peer group average (65% higher).

Table 59. Agile Business Analyst Rates Table

Service	Measure	WaTech Rate	Peer Avg Rate	Peer 25 th Pctl Rate	Peer 75 th Pctl Rate
Agile Business Analysts	Per Hour	160	97	94	102

Table 60. Agile Business Analyst Billed Volume and Total Cost Recovered

Service	Billed Units	WaTech Revenue	Peer Avg Revenue	Peer 25 th Pctl Revenue	Peer 75 th Pctl Revenue
Agile Business Analysts	502	80,320	48,694	47,188	51,204

Note: No forecast data available. Used the amount billed for FY18 H1 and doubled.

3. UX & Accessibility

Total revenue collected is \$0.078M versus \$0.061M for the peer group average (27% higher).

Table 61. UX & Accessibility Rates Table

Service	Measure	WaTech Rate	Peer Avg Rate	Peer 25 th Pctl Rate	Peer 75 th Pctl Rate
UX and Accessibility Consulting	150	118	105	131	150

Table 62. UX & Accessibility Billed Volume and Total Cost Recovered

Service	Billed Units	WaTech Revenue	Peer Avg Revenue	Peer 25 th Pctl Revenue	Peer 75 th Pctl Revenue
UX and Accessibility Consulting	521	78,150	61,478	54,705	68,251

4. Web Platform/Design

One-time site design and set-up fees are higher than peers but ongoing maintenance and support fees are lower. Total revenue collected is \$0.33M versus \$0.31M for the peer group average (5% higher).

Table 63. Web Platform/Design Rates Table

Service	Measure	WaTech Rate	Peer Avg Rate	Peer 25 th Pctl Rate	Peer 75 th Pctl Rate
Setup Fee (one-time) - Simple (Avg Rate)	6,500	3,798	3,485	4,160	6,500
Setup Fee (one-time) - Standard (Avg Rate)	11,500	6,787	6,099	7,280	11,500
Web Hosting (Platform) - Simple (Avg Rate)	200	252	54	303	200
Web Hosting (Platform) - Standard (Avg Rate)	400	439	65	329	400

Note: WaTech also offers complex sites at negotiated pricing. The quote based rates are not included in this analysis. Some hourly peer rates converted to simple and standard site set-up fees. The conversion assumes 40 hours for simple site design and 70 hours for standard, estimated based on an assumed WaTech hourly rate for equivalency.

Table 64. Web Platform/Design Billed Volume and Total Cost Recovered

Service	Billed Units	WaTech Revenue	Peer Avg Revenue	Peer 25 th Pctl Revenue	Peer 75 th Pctl Revenue
Setup Fee (one-time) - Simple (Avg Rate)	1	6,500	3,798	3,485	4,160
Setup Fee (one-time) - Standard (Avg Rate)	8	92,000	54,296	48,792	58,240
Web Hosting (Platform) - Simple (Avg Rate)	6	14,400	18,144	3,888	21,816
Web Hosting (Platform) - Standard (Avg Rate)	45	216,000	237,006	35,100	177,660
Total		328,900	313,244	91,265	261,876